

Why is the County concerned about Four Mile Run's bacteria levels?

State monitoring data collected near the Shirlington Road bridge indicates that bacteria levels in Four Mile Run frequently do not meet State standards to support primary contact recreation (swimming and similar activities where water may be ingested) and sometimes also do not meet State standards for secondary contact (wading and other contact with the water other than swimming). In other words, the monitoring data show that bacteria levels are too high. From a regulatory perspective, Four Mile Run is considered 'impaired' for bacteria.

Since March 2014, only 4 out of 15 State-collected samples were compliant with the State's water quality standards. The remaining 11 samples did not meet the primary water quality standard and of those, six did not meet the secondary contact standard.

The County is required to meet the State's regulatory expectations for the bacteria Total Maximum Daily Load (TMDL) for Four Mile Run – which establishes a pollution 'budget' for the stream. The County must address controllable sources of bacteria– human and canine contributions. County-owned and operated dog parks fall into this category. Pollution prevention is a critical component of addressing stream health and protecting human health.

How do bacteria differ from other pollutants that impact Four Mile Run?

The biological nature of bacteria and its ability to survive and reproduce outside of the host makes this pollutant extremely challenging to remediate and study. Bacteria levels at a given location may increase due to reproduction within the stream sediment as well as from runoff carrying bacteria into the stream.

Bacteria levels have fluctuated over time throughout Four Mile Run, which is the nature of bacteria in urban streams and reflective of both the sources and behavior of this pollutant.

Why does the County test for bacteria in the streams?

The County's bacteria monitoring program is intended to supplement the official DEQ data by sampling at 21 in-stream locations throughout the County for the main purposes of:

- Tracking bacteria levels over time
- Supporting the County's advisement that our streams are generally safe for superficial contact although there are times when even this level of contact is not advisable
- Determining whether any water or sewer infrastructure issues may be affecting bacteria levels in the stream

The County posts graphs of bacteria data to help illustrate the content provided on the County's [Bacteria](#) and [Stream Monitoring](#) webpages, showing that bacteria levels can quickly spike but overall are usually below the secondary contact standard. Dog owners often reference these data when they are weighing the pros and cons of allowing their dog to play in Arlington streams.

The volunteer data is not lab-quality and cannot be used for determining Four Mile Run's impairment status.

What does the County's bacteria data tell us about the Shirlington dog park?

The County's bacteria monitoring program is not designed to isolate the contribution of bacteria from a specific property or land use, including the Shirlington dog park. However, given the intensity of use of the Shirlington Dog park, the large number of waste piles County staff have noted within the park, and the lack of best practices to prevent runoff from the dog park from entering Four Mile Run, the dog park is considered a likely contributor of nonpoint source pollution—including bacteria—to Four Mile Run. *E. coli* from pet waste is a nonpoint pollutant. When excrement is left on the ground, runoff carries the excrement and its bacteria and pathogens to the stream. Pet waste is considered an anthropogenic pollutant source because it is a controllable source and should be picked up by the pet owner.

As highlighted above, the County's bacteria data shows wide fluctuations over time throughout Four Mile Run. That is the nature of bacteria levels in urban streams and reflective of both the sources and behavior of this pollutant.

Is the County enforcing the pet waste pickup ordinance?

Yes, the pet waste ordinance is enforced but enforcement is extremely difficult. Animal control (which operates under the Animal Welfare League) can issue a ticket for those caught not picking up, but the officer must see the pet defecate, and then the owner and pet leave the area without picking up. If the officer doesn't see the 30 seconds (give or take) when this action takes place, then enforcement cannot happen.

What outreach has taken place related to pet waste pickup?

Noting the limited time and staff that animal control and the County have to devote to the issue of pet waste, a collaborative outreach approach has been taken. The Office of Sustainability and Environmental Management (OSEM) encouraged pet waste pickup in partnership with:

- Animal Welfare League of Arlington
- Office of Emergency Management (OEM)
- Walk Arlington
- Arlington Park Rangers
- Clarendon Animal Care
- Arlington's Nature Centers – Long Branch, Gulf Branch and Potomac Overlook

The pet waste pickup message has been delivered by a variety of avenues including:

- Signage in the dog parks
- Thousands of poop bag dispensers have been distributed at events including the County Fair, Shirlington's Wags and Whiskers, and Walk Arlington

- OSEM has posted several posts on the Natural Arlington blog related to dogs including whether dogs should be in Arlington streams. “[The Scoop on Poop](#)” specifically addresses the importance of picking up pet waste.
- OSEM provided AWLA with dog Frisbees in 2017 to be provided as rewards for those “caught” picking up after their pets in our parks. OSEM staff also plan to hand the Frisbees out as rewards for good behavior during the summer of 2017.
- OSEM, through the Only Rain campaign, has run ads on regional cable TV promoting pet pickup. Channels have included the USA network, Cartoon network, Discovery, and others.